

Quick Guide to Food Sample Submission Information and Procedures

The Food Protection Program must be contacted prior to submitting all samples.

Phone Numbers

Food Protection Program: 617-983-6712 617-983-6770 (fax)

Food Microbiology Lab: 617-983-6610

Analytical Chemistry Laboratory: 617-983-6653

**State Laboratory Institute
305 South Street
Jamaica Plain, MA 02130**

	Food Microbiological Laboratory	Analytical Chemistry Laboratory
Available Tests	<p>Procedures involving "Counts":</p> <ul style="list-style-type: none"> ➤ Standard Plate Count (SPC) also called Aerobic Plate Count (APC) ➤ Total coliform count ➤ Fecal coliform count ➤ Staphylococcus aureus count ➤ Bacillus cereus count ➤ Viable yeast count ➤ Viable mold count ➤ Clostridium perfringens count ➤ Total E. coli count (special request) <p>Detection (viable organisms):</p> <ul style="list-style-type: none"> ➤ Clostridium botulinum (special request) ➤ Salmonella spp. ➤ E.coli O157:H7 ➤ Campylobacter spp. ➤ Shigella spp. ➤ Vibrio spp. ➤ Yersinia spp. ➤ Listeria monocytogenes ➤ Shiga toxigenic E. coli other than O157:H7 (STEC) (special request) <p>Toxin testing:</p> <ul style="list-style-type: none"> ➤ Paralytic Shellfish Poisoning (PSP) ➤ Botulinal toxin (special request) ➤ Shiga toxin (special request) <p>Sterility confirmation:</p> <ul style="list-style-type: none"> ➤ Canned goods ➤ Infant food <p>Filth analysis:</p> <ul style="list-style-type: none"> ➤ Extraneous material ➤ Insect identification ➤ Phosphatase test for rodent droppings ➤ Rodent urine (ultraviolet light) <p style="text-align: center;">Note: The Food Lab cannot test for viruses, parasites, or the presence of blood in food or beverages.</p>	<p>Metals and elements in foods and beverages</p> <ul style="list-style-type: none"> ➤ copper ➤ lead ➤ arsenic ➤ mercury ➤ others as needed <p>Industrial chemicals</p> <ul style="list-style-type: none"> ➤ Pesticides in fruit and vegetables <ul style="list-style-type: none"> ○ organophosphates ○ organochlorines ○ carbamates ➤ Rodenticides ➤ Polychlorinated biphenyls (PCBs) ➤ Petroleum distillates (fuels) <p>Unusual tastes or odors in foods and beverages</p> <ul style="list-style-type: none"> ➤ Volatile organic compounds (VOCs) <ul style="list-style-type: none"> ○ Solvent-like odors in food or beverages <ul style="list-style-type: none"> • Benzene • Ethylbenzene • Toluene • Xylene • Others as needed ○ Surfactant screen <ul style="list-style-type: none"> ▪ Anionic or cationic determination of surfactant <p>Preservatives in Beverages (labeling issues)</p> <ul style="list-style-type: none"> ➤ Benzoic acid ➤ Sorbic acid <p>Sulfite testing in food products</p> <p>Biogenic amines (histamine) testing in fish for scombroid poisoning</p> <p>Seafood toxins</p> <ul style="list-style-type: none"> ➤ PSP ➤ Domoic acid <p>Testing products for evidence of tampering</p> <ul style="list-style-type: none"> ➤ Organoleptic testing ➤ Pill identification (medications) ➤ Chemical spot tests ➤ Volatile and semi-volatile comparisons ➤ pH testing
Appropriate Samples	<ul style="list-style-type: none"> ➤ Samples associated with investigations of suspect foodborne illness involving 2 or more people ➤ Samples associated with a single <i>laboratory confirmed</i> case if the suspect food was eaten within the incubation period ➤ Samples which may be associated with one or more cases of botulism ➤ Raw ground beef or meat if associated with confirmed case of E. coli O157:H7 ➤ Suspect illnesses related to baby foods or formulas 	<ul style="list-style-type: none"> ➤ Injury or illness due to suspect foreign chemical substance in food: ONE CASE is often enough to warrant an examination ➤ Pills or capsules found in food or beverage ➤ Unusual chemical odor or taste with or without injury or illness ➤ Finfish samples associated with histamine (scombroid) poisoning ➤ Shellfish associated with suspect PSP or domoic acid poisoning

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Sample Collection Procedures	<ul style="list-style-type: none"> ➤ Keep the sample in the original container if possible. ➤ Use sterile containers and do not touch the inside of the container. However, if a sterile container is not available, any clean container which can be tightly sealed may be used. ➤ Use sterile utensils, tongs, spoons, etc, if available. If not available, other clean utensils can be used. ➤ Make sure caps are tight to prevent leakage. ➤ If multiple samples are suspected pack each separately. Do not commingle individual samples. ➤ Whirlpack bags can be used for solid foods but should not be used for liquids. ➤ Collect adequate amounts: 100-150 grams or milliliters (4-6 oz) if available. ➤ When collecting liquid samples, fill the container no higher than $\frac{3}{4}$ full in order to allow for proper mixing of the sample. ➤ When collecting water from spigots, let the water run for 2 minutes before collecting. ➤ Label all samples clearly with waterproof ink and labels. ➤ If the sample is refrigerated, keep it cool ($<41^{\circ}$ F) until submission. Gel packs are usually adequate. ➤ If the sample is frozen, keep it frozen. ➤ Perishable foods should be refrigerated and kept cold ($< 41^{\circ}$ F). ➤ If a sample for microbiological testing cannot be submitted for several days the sample can be frozen. 	<ul style="list-style-type: none"> ➤ Keep the sample in the original container if possible or consult DFD or lab about appropriate container. ➤ Make sure caps are tight to prevent leakage. ➤ Collect control samples. ➤ Submit samples as soon as possible. If there is a delay, consult the lab about whether the sample should be frozen or refrigerated. When in doubt, keep the sample in the refrigerator. ➤ Histamine: Finfish samples should be submitted right away or frozen immediately.
Sample Submission Procedures	<p>Call DFD prior to submitting sample.</p> <ul style="list-style-type: none"> ➤ Fill out sample submission form and give to Food Lab when samples are dropped off. ➤ Samples should be submitted to SLI by the local board of health. Consumers should not be told to drop off samples. ➤ Maintain temperature control of sample. ➤ Chain of custody should be described on a separate form (ie. the narrative page of an inspection report form) ➤ If the food sample is associated with suspect illness, submit Foodborne Illness Complaint Worksheet. ➤ The sample must be submitted ASAP, preferably in-person or by courier. Regular mail is not appropriate except for filth evaluation in non-perishable foods. Overnight mail can be used if sample is packed with sufficient gel packs to keep it cool. ➤ For pre-packaged foods or beverages, obtain the name and address of the manufacturer and/or distributor, product code, expiration or sell-by date and size and type of packaging. ➤ For pre-packaged foods or beverages, an unopened container of the same lot number should be submitted. 	<p>Call DFD prior to submitting sample.</p> <ul style="list-style-type: none"> ➤ Submit a detailed description of the complaint with the sample. ➤ Submit the results of the environmental investigation. ➤ Submit chain of custody information. ➤ Samples should be submitted to SLI by the local board of health. Consumers should not be told to drop off samples. ➤ Maintain temperature control of sample. ➤ Submit the sample in the original container if possible or consult DFD or lab about appropriate container. ➤ Control samples MUST be submitted with the suspect sample. ➤ For pre-packaged foods or beverages, obtain the name and address of the manufacturer and/or distributor, product code, expiration or sell-by date and size and type of packaging.